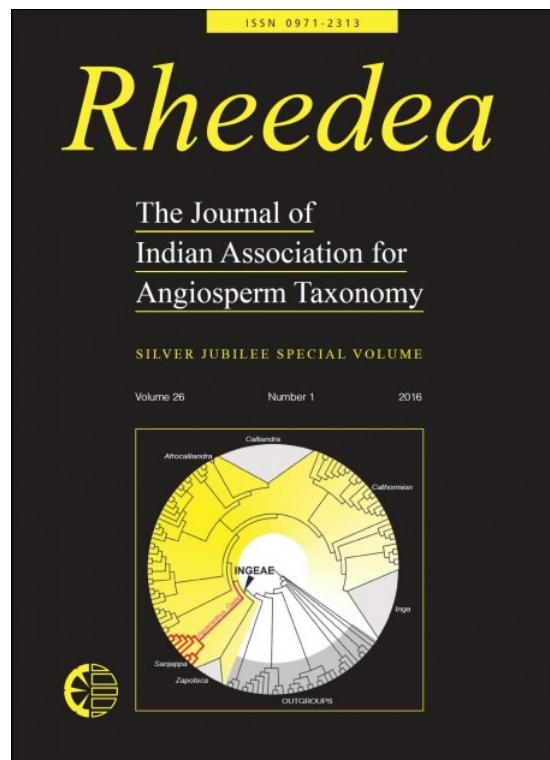




The taxonomic identity of *Jasminum matthewii* (Oleaceae)

N. Balachandran and K. Rajendiran



How to cite:

Balachandran N. & K. Rajendiran 2016. The taxonomic identity of *Jasminum matthewii* (Oleaceae). *Rheedia* 26(1): 54-56.

<https://dx.doi.org/10.22244/rheedia.2016.26.01.08>

Received: 1.4.2015

Revised and accepted: 21.6.2016

Published in print: 30.06.2016

Published Online: 30.06.2016



Published by Indian Association for Angiosperm Taxonomy

This volume of *Rheedia* is published with partial financial assistance from Science Engineering Research Board, Government of India, New Delhi

The taxonomic identity of *Jasminum matthewii* (Oleaceae)

N. Balachandran^{1,*} and K. Rajendiran²

French Institute of Pondicherry, 11 Saint Louis Street, Puducherry – 605 001, India.

¹Kanchi Mamuniver Centre for Post-Graduate Studies, Lawspet, Puducherry – 605 008, India.

*E-mail: nbala_plant@yahoo.co.in

Abstract

Jasminum matthewii P.S. Green has been treated here as a heterotypic synonym of *J. angustifolium* (L.) Willd. var. *hirsutum* P.S. Green. Further a taxonomic key to distinguish three varieties of *J. angustifolium* has been provided.

Keywords: Heterotypic Synonym, *Jasminum angustifolium* var. *hirsutum*, Variations

Introduction

While studying the disjunct distribution and population status of some Indosrilankan taxa distributed in tropical dry evergreen forests of Tamil Nadu, authors have examined the type specimen of *Jasminum matthewii* P.S. Green deposited at RHT. A critical examination of protologue (Green, 2003) and herbarium specimens housed at AURO and RHT revealed that *J. matthewii* need to be relegated to a heterotypic synonym of *J. angustifolium* (L.) Willd. var. *hirsutum* P.S. Green, which was earlier reported as an addition to the flora of India from Tamil Nadu (Gastmans & Balachandran, 2006). Further, the morphological variations extant among three varieties of *J. angustifolium* were evaluated critically for the first time based primarily on fresh and herbarium specimens (Appendix 1) collected from Coromandel coast of northern Tamil Nadu (Kancheepuram, Villupuram and Cuddalore districts) and Union Territory of Puducherry. This includes 19 accessions of var. *angustifolium*, 11 accessions of var. *hirsutum*, and 21 accessions of var. *sessiliflorum* (Vahl) P.S. Green.

Jasminum angustifolium* (L.) Willd. var. *hirsutum P.S. Green, Kew Bull. 40: 228. 1985; in Dassan., Rev. Handb. Fl. Ceylon 6: 259. 1987 & Kew Bull. 58: 293. 2003; Gastmans & N. Balach., J. Econ. Taxon. Bot. 30: 365. 2006.

Type: SRI LANKA, Jaffna district, Mannar-Poonaryn road, near 36 mile post, 22.6.1975, D.B. & D. Sumithraarachchi 786 (Holotype US00589041, image!; Isotype K000901409, image!). **Fig. 1a**

Jasminum matthewii P.S. Green, Kew Bull. 58: 284. 2003, **syn. nov.**

Type: INDIA, **Tamil Nadu**, Villupuram district, Puthupet Sacred Grove, 26.5.1999, K.T. Augustine & K.M. Matthew 60741 (Holotype K000545676, image!; Isotype RHT!). **Fig. 1b**

Shrub, twining or straggling, slender, evergreen, tomentose. Leaves opposite, broadly ovate to elliptic-oblongate, (1–)2–4(–6) × (0.7–)1–2(–4) cm, rounded to subcordate at base, entire at margins, obtuse to broadly acute with mucro at apex, subcoriaceous; lateral veins (3–)4–5 pairs, prominent on both surfaces; domatia 1 or 2 pairs on vein axils beneath; petioles (1.5–)3–5(–10) mm long. Inflorescence a cyme, terminal, only on side shoots; peduncles to 11 mm long, 1–3(–4)-flowered; pedicels 4–8 mm long. Calyx tube 1–1.5 mm long, 5-lobed; lobes filiform, 1–2 mm long. Corolla hypocrateriform, white, fragrant; tube 11–14 mm long; lobes 5, rarely 7, 12–13 × 2–4 mm. Berries paired, rarely single, 7–8 × c. 10 mm, black and shiny when ripe.

Flowering & fruiting: Throughout the year.

Habitat: Growing under partial shade to open sunlight, especially in forest openings, gaps and edges of sacred groves, reserve forests, hillocks and along the fences; from the eastern coastal plains to 650 m on the eastern hillslopes of the Western Ghats.

Specimens examined: INDIA, **Puducherry**, Murthikuppam, 12.3.2003, W.F. Gastmans & N. Balachandran 8370, 8371 (AURO). **Tamil Nadu**, Cuddalore district, Kulanthaikuppam, 26.11.1997, N. Balachandran, Paul Blanchflower & W.F. Gastmans 5992 (AURO, K & FRLH); Periyakumati, 12.2.2003, W.F. Gastmans & N. Balachandran 4913 (AURO); Sedapalayam-Pudur, 15.2.2003, W.F. Gastmans &

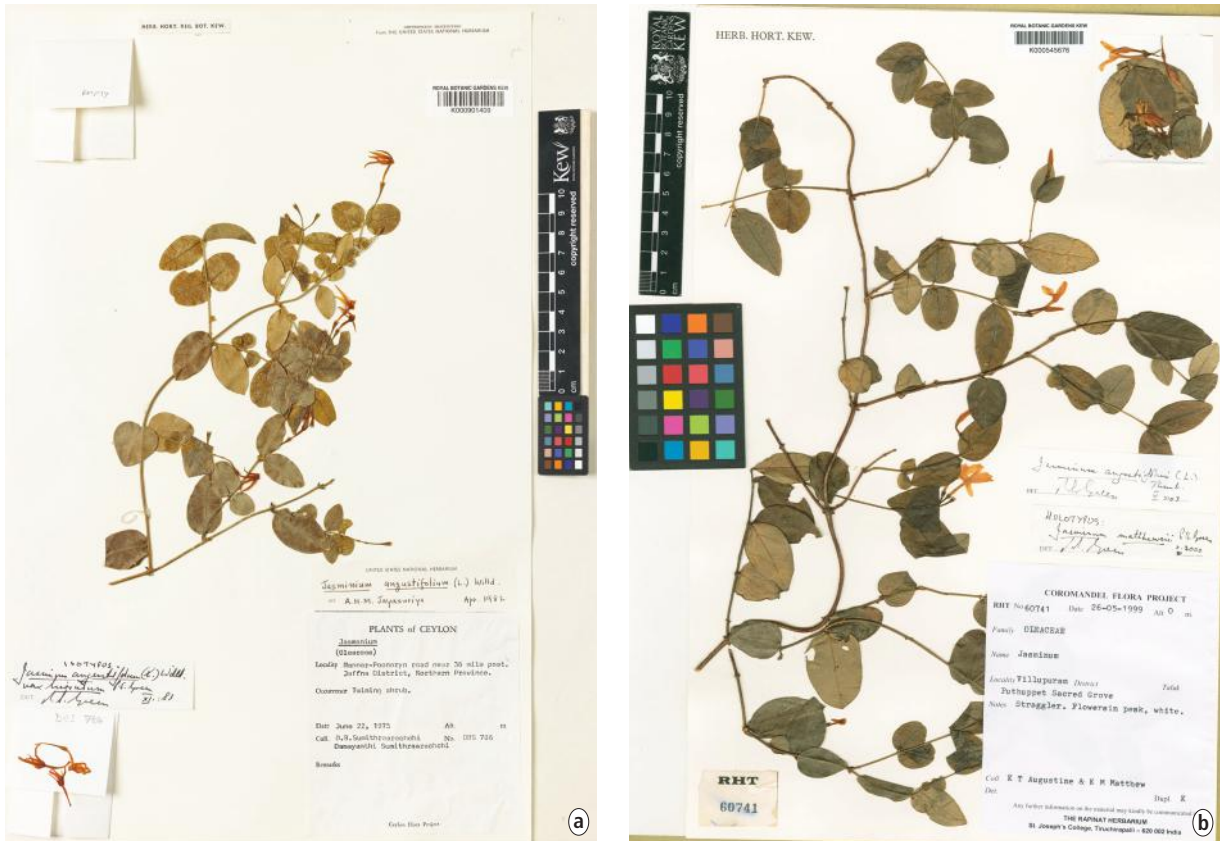


Fig. 1. a. Isotype of *Jasminum angustifolium* var. *hirsutum* P.S. Green (D.B. & D. Sumithraarachchi 786, K000901409); b. Holotype of *J. matthewii* P.S. Green (K.T. Augustine & K.M. Matthew 60741, K000545676).

N. Balachandran 4985 (AURO); Tirumanikuzhi, 19.3.2003, W.F. Gastmans & N. Balachandran 8250 (AURO); Periyakumati, 25.6.2003, W.F. Gastmans & N. Balachandran 8630 (AURO); Palvathunnam, 1.10.2003, W.F. Gastmans & N. Balachandran 9280 (AURO); Villupuram district, Kasipalayam, 18.6.1998, W.F. Gastmans & N. Balachandran 6657 (AURO & FRLH); Oorani, 28.5.1999, K.M. Matthew & K.T. Augustine 60855 (RHT); Kiliyanur, 12.3.2003, W.F. Gastmans & N. Balachandran 8208 (AURO).

Distribution: India (Tamil Nadu and Union Territory of Puducherry) and Sri Lanka.

Key to three varieties of *J. angustifolium*

1. Leaves recurved at margins; secondary veins distinct on both surfaces; domatia present at axils of veins beneath. var. **hirsutum**
1. Leaves not recurved at margins; secondary veins indistinct on both surfaces; domatia absent at axils of veins beneath **2**
2. Venation distinct only on upper surface; inflorescence a cyme, (1–)3-flowered, sessile; calyx

lobes 3–4 times longer than tube; fruiting calyx much longer than fruits. . . . var. **sessiliflorum**

2. Venation obscure on both surfaces; inflorescence a cyme or corymb, (1–)4–7-flowered, pedunculate; calyx lobes almost equal to tube; fruiting calyx shorter than fruits var. **angustifolium**

Green (1985) stated that the presence or absence of pubescent hair in the species of *Jasminum* is of no taxonomic significance. During the present study, presence of tomentose or pubescence hair in all these varieties were noticed in the newly sprouted branches after summer rain. However, hairs persist only in the var. *hirsutum* throughout and in other two varieties, viz., *angustifolium* and *sessiliflorum* the hairs become either puberulent or glabrous at maturity. The presence of domatia at the axils of lateral veins on the lower surface of leaves in var. *hirsutum* and *J. matthewii* strongly suggests that both are same taxon. Green (2003) allied his new species, *J. matthewii* with *J. amabile*, a species endemic to Nepal. Till date, the latter is known only by the type collection. Therefore, there is little justification in comparison between these

two species as they are biogeographically disjunct in distribution.

Acknowledgements

We are grateful to the Director, French Institute of Pondicherry, Puducherry and the Director, Kanchi Mamuniver Centre for Post-Graduate Studies, Puducherry, for the facilities. We thank the Board of Trustees of the Royal Botanic Gardens, Kew and the Director, RHT, Tiruchirappalli, for permission to use the image of type specimens.

Literature Cited

- Gastmans, W.F. & N. Balachandran 2006.** *Jasminum angustifolium* (L.) Willd. var. *hirsutum* Green (Oleaceae) – an addition to the flora of India from Tamilnadu. *J. Econ. Taxon. Bot.* **30**: 365–367.
- Green, P.S. 1985.** Notes on two Jasmines from South India & Ceylon. Studies in the genus *Jasminum* (Oleaceae): IX. *Kew Bull.* **40**: 225–230.
- Green, P.S. 2003.** Synopsis of the Oleaceae from the Indian Sub-Continent. *Kew Bull.* **58**: 257–295.
- Appendix 1: Specimens examined**
- Jasminum angustifolium* var. *angustifolium*:** INDIA, **Tamil Nadu**, Cuddalore district, T. Pudhupalayam, 28.5.2003, W.F. Gastmans & N. Balachandran 8352 (AURO); Kothhattai, 27.8.2003, W.F. Gastmans & N. Balachandran 9090 (AURO); Kancheepuram district, Kunnathamman Kovil, 14.8.2002, W.F. Gastmans 3798, 3809 (AURO); Alathur Reserve Forest, 24.9.2003, W.F. Gastmans & N. Balachandran 9199 (AURO); Kollathanallur, 8.10.2003, W.F. Gastmans & N. Balachandran 9427 (AURO); Muttukadu satram, 21.7.2004, W.F. Gastmans & N. Balachandran 10537 (AURO); Villupuram district, Shakti, Auroville, 2.7.1994, W.F. Gastmans F5140 (AURO & FRLH); Kurumbaram Reserve Forest, 9.6.1995, Jaap den Hollander, Paul Blanchflower & W.F. Gastmans F02824; 19.3.1997, Jaap den Hollander, Paul Blanchflower & W.F. Gastmans F10079 (AURO & FRLH); Auroville Botanical Garden, 20.6.2003, W.F. Gastmans & N. Balachandran 8436 (AURO); Aranya, Auroville, 19.8.2003, W.F. Gastmans & N. Balachandran 8980, 8984 (AURO); Auroville Botanical Garden, 5.9.2003, W.F. Gastmans & N. Balachandran 9156; 10.11.2004, Mukta & Aadhi 12550 (AURO).
- Jasminum angustifolium* var. *sessiliflorum*:** INDIA, **Puducherry**, Krishnavaram, 3.7.2002, W.F. Gastmans 3609 (AURO); Kumalam, 31.7.2002, W.F. Gastmans 3670 (AURO); Krishnavaram, 8.4.2003, N. Balachandran 8495 (AURO); T. Murthikuppam, 18.6.2003, W.F. Gastmans & N. Balachandran 8372 (AURO); 3.7.2003, W.F. Gastmans 3593 (AURO); Ramanathapuram, 3.7.2003, W.F. Gastmans 3558 (AURO); Mangalam, 3.7.2003, W.F. Gastmans 3574 (AURO). **Tamil Nadu**, Cuddalore district, Kulanthaikuppam, 27.5.1998, G. Baldwin, Jaap den Hollander & W.F. Gastmans F6628 (AURO & FRLH); Nathamedu, 30.4.2003, N. Balachandran 8547 (AURO); Periyakumatti, 27.8.2003, W.F. Gastmans & N. Balachandran 9089 (AURO); Periyapattu, 13.10.2003, W.F. Gastmans & N. Balachandran 9529, 9481 (AURO); Kancheepuram district, Vallam Reserve Forest, 6.8.1997, Jaap den Hollander, Paul Blanchflower & W.F. Gastmans, F5979 (AURO & FRLH); Avirimedu Malai, 29.7.1998, Paul Blanchflower & W.F. Gastmans F6744 (AURO & FRLH); Kollathanallur, 7.8.2003, W.F. Gastmans 3764 (AURO); Villupuram district, Kurumbaram RF, 26.5.1995, Jaap den Hollander, Paul Blanchflower & W.F. Gastmans F02793 (AURO & FRLH); Pattanur, 19.8.2003, W.F. Gastmans & N. Balachandran 8922 (AURO); Kaliveli tank, 7.10.2003, W.F. Gastmans & N. Balachandran 9412 (AURO); Ommiper, 21.1.2004, W.F. Gastmans & N. Balachandran 9937 (AURO); Annapurna, Auroville, 1.6.2004, W.F. Gastmans & N. Balachandran 10463 (AURO); Vikravandi, 1.12.2004, W.F. Gastmans & N. Balachandran 11356 (AURO).

Received: 1.4.2015

Revised and Accepted: 21.6.2016